

## **Federal Drop Ship Program**

### **CFL Drop-Ship and Energy Audit Program**

#### **Program Description (Audits)**

The Army Corps of Engineers/Bureau of Reclamation Compact Fluorescent Lamp (CFL) Drop-Ship and Energy Audit Program is a region-wide initiative designed to drop-ship CFLs and perform energy audits on all 30 hydroelectric facilities. By agreement with the Corps, Bureau, and BPA's Federal Hydro Group, Energy Efficiency agreed to schedule audits at each of the hydro facilities as efficiencies at the point of generation provide system and regional benefits. System benefits include improved working environments and reduced maintenance costs. Regional benefits include reduced exposure to market prices for electricity.

#### **Program Description (CFLs)**

BPA negotiates with CFL suppliers to ship the necessary CFLs directly to the hydro facilities. Sometimes the CFLs come from a central warehouse. Recently, however, the CFLs were specially manufactured for the FCRPS and shipped directly to the hydro facilities from the manufacturing plant in China. The latest shipments of CFLs were high quality and very inexpensive. The reduced overhead costs and low CFL prices make this program very cost effective.

The hydro facility audits identified a pattern. The majority of energy and water savings are associated with the installation of CFLs in the hydro facilities' galleries and powerhouses. It is estimated that 70 percent of achievable energy savings at the dams come from the installation of CFLs. This fact and the following key considerations prompted a region-wide CFL drop-ship program:

- The program is cost effective;
- CFLs provide immediate delivery of electricity savings and water conservation;
- CFLs can be very inexpensive;
- The CFL drop-ship energy savings estimate for all 30 dams is 2.7 average megawatts;
- After lamp counts were completed, Energy Efficiency ordered the designated number of lamps and they were drop-shipped directly to the hydro facilities; and
- Hydro facility personnel replace incandescent bulbs with the CFLs and report the estimated number of replacements to BPA.

Savings are tracked under the Conservation Augmentation Corps/Bureau Region-wide Initiative

## **Project Manager**

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## **Staffing**

The Program Manager provides overall program management and direction. Policy decisions are referred to management. Tracking, reporting, and invoice payments are provided by the project manager. For those audits that are turned into projects, BPA Procurement provides contracting support and Corporate Disbursement schedules contractor payments with the Treasury Department.

## **Note**

As the first audits were being conducted, it was noticed that fish hatcheries were co-located with the dams. Although many of these hatcheries were owned and/or operated by organizations other than the Corps and Bureau, many of them receive station service power directly from the dam. It was thought that even greater savings and efficiencies could be achieved if the hatcheries operated more efficiently. Auditing the hatcheries at the same time the dams were being audited would provide greater economies of scale as well. Expanding the hydro audits to include hatcheries was considered. However, further research revealed that there are over 280 fish hatcheries in the Pacific Northwest region. Many of these hatcheries are located in BPA's load-following utility customers' service territories and/or Bonneville is directly or indirectly funding the operations and maintenance of these hatcheries (including water and/or electricity costs). If efficiencies were achieved at these hatcheries, BPA could conceivably reduce load to those utilities serving the hatcheries and reduce operations and maintenance costs incurred in supporting these hatcheries. EE was tasked to explore the possibility of a Region-Wide Fish Hatchery Energy and Water Conservation Initiative. That strategy is up for management review and consideration.